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STATE OF CALIFORNIA  
WATER RESOURCES CONTROL BOARD  
DIVISION OF DRINKING WATER

**TO:** DOUBLE L MOBILE RANCH PARK  
648 N. Monte  
Fresno, CA 93728  
Water System No. 1000248

**Attn:** Carl Hunt

**CITATION FOR VIOLATION OF CALIFORNIA CODE OF REGULATIONS, TITLE 22,  
SECTION 64426.1 (b) (2) - TOTAL COLIFORM MAXIMUM CONTAMINANT LEVEL**

**September 2014**

**CITATION NO. 03-23-14C-078**

**Issued on December 12, 2014**

Section 116650 of the California Health and Safety Code authorizes the issuance of a citation to a public water system for violation the California Safe Drinking Water Act (Health and Safety Code, Division 104, Part 12, Chapter 4, commencing with Section 116270) (hereinafter "California SDWA"), or any regulation, standard, permit or order issued or adopted thereunder.

The State Water Resources Control Board, acting by and through its Division of Drinking Water (hereinafter "Division") and the Deputy Director for the Division (hereinafter "Deputy Director"), hereby issues a citation to the Double L Mobile Ranch Park Water System (hereinafter, Water System) (mailing address: 648 N. Monte, Fresno, CA 93728) for



29 violation of California Code of Regulations (CCR), Title 22, Section 64426.1 subsections  
30 (b)(2).

31 **APPLICABLE AUTHORITIES**

32 **Section 116650 of California Health and Safety Code provides:**

33 (a) If the division determines that a public water system is in violation of this chapter or  
34 any regulation, permit, standard, citation, or order issued or adopted thereunder, the  
35 division may issue a citation to the public water system. The citation shall be served upon  
36 the public water system personally or by certified mail. Service shall be deemed effective  
37 as of the date of personal service or the date of receipt of the certified mail. If a person to  
38 whom a citation is directed refuses to accept delivery of the certified mail, the date of  
39 service shall be deemed to be the date of mailing.

40 (b) Each citation shall be in writing and shall describe the nature of the violation or  
41 violations, including a reference to the statutory provision, standard, order, citation, permit,  
42 or regulation alleged to have been violated.

43 (c) A citation may specify a date for elimination or correction of the condition constituting  
44 the violation.

45 (d) A citation may include the assessment of a penalty as specified in subdivision (e).

46 (e) The division may assess a penalty in an amount not to exceed one thousand dollars  
47 (\$1,000) per day for each day that a violation occurred, and for each day that a violation  
48 continues to occur. A separate penalty may be assessed for each violation.

49 **California Code of Regulations, Title 22, Section 64426.1, subsections (a) and (b)**  
50 **provide, in relevant part:**

51 **§64426.1. Total Coliform Maximum Contaminant Level (MCL).**

52 (a) Results of all samples collected in a calendar month pursuant to Sections 64423,  
53 64424, and 64425 that are not invalidated by the Division or the laboratory shall be  
54 included in determining compliance with the total coliform MCL. Special purpose  
55 samples such as those listed in §64421(b) and samples collected by the water  
56 supplier during special investigations shall not be used to determine compliance with  
57 the total coliform MCL.

58 (b) A public water system is in violation of the total coliform MCL when any of the  
59 following occurs:

60 (1) For a public water system which collects at least 40 samples per month, more  
61 than 5.0 percent of the samples collected during any month are total coliform-  
62 positive; or

63 (2) For a public water system which collects fewer than 40 samples per month,  
64 more than one sample collected during any month is total coliform-positive



65 **§64424 (d) Repeat Sampling**

66  
67 if a public water system for which fewer than five routine samples per month are  
68 collected has one or more total coliform-positive samples, the water supplier shall  
69 collect at least five routine samples the following month.  
70

71 **STATEMENT OF FACTS**

72 The Water System is operated under Water Supply Permit No. 03-23-11P-028, issued on  
73 July 29, 2011. Double L Mobile Ranch Park Water System is a community water system  
74 serving a population of approximately eighty (80) persons through thirty-seven (37)  
75 residential connections.  
76

77 The Water System is required to collect a minimum of one (1) distribution system  
78 bacteriological sample per month. The bacteriological water analysis results submitted by  
79 the Water System reported the presence of total coliform bacteria in six (6) of six (6)  
80 samples, including the well, collected by the Water System in September 2014. None of  
81 the positive samples showed the presence of fecal coliform or *E. coli* bacteria.  
82

83 The following table summarizes the bacteriological monitoring conducted during the  
84 months of September and October of 2014.  
85

Collection Date	Number of Samples	Sample Labeled	Number TC positive	Number E. Coli positive
9/8/2014	1	Routine	1	0
9/10/2014	5	Repeat (including well)	5	0
10/3/2014	5	Routine (w/ chlorine residual)	0	0

86  
87 Due to the above-mentioned total coliform positive samples, the Water System failed the  
88 total coliform MCL for the month of September 2014. Results for water samples tested for

coliform bacteria during 2014 are summarized in Attachment A. The cause of contamination is unknown although the water system's well has tested positive in repeat sampling as well as in another Total Coliform Rule Maximum Contaminant Level violation during March 2014. Disinfection of the distribution system was conducted during September 2014. It is unclear whether continuous chlorination remains in place.

The five routine distribution samples required the month following 2014, which had six total coliform-positive samples, were collected on October 3, 2014; none of those distribution samples were positive for total coliform bacteria. Chlorine residuals were reported for three of those repeat samples, ranging from 1.7 to 1.8 ppm CL2.

The Groundwater Rule adopted by the Division, effective August 18, 2011, requires the collection of a sample for bacteriological evaluation from wells serving the system in response to a coliform positive distribution sample. This requirement was met with the repeat sampling collected in July and August 2014.

#### **VIOLATIONS**

The Drinking Water Field Operations Branch of the State Water Resources Control Board – Division of Drinking Water (hereinafter 'Division') hereby issues a Citation to Double L Mobile Ranch Park Water System (hereinafter 'Water System'), for failure to comply with Section 116555(a)(1) of the CHSC and Sections 64426.1(b)(2) and 64424(d) of Title 22, California Code of Regulations (CCR). Specifically, the Water System (mailing address: 648 N. Monte, Fresno, CA 93728) failed to comply with the total coliform Maximum Contaminant Level (MCL) for the month of September 2014.



**NOTIFICATION REQUIREMENTS**

Section 64426.1(c) requires a public water system to notify the Division and the consumers of the water system, when a violation of Section 64426.1(b)(1) through (4) the total coliform MCL occurs. Notification to the Division shall be by the end of the business day on which the violation has been determined. If the Division is closed, notification shall be within 24 hours of the determination. The Division was notified on September 11, 2014, in accordance with the above-referenced section.

A Tier 2 Public Notice for violation of paragraph 64426.1(b) (2) shall be given pursuant to Section 64463.4 and 64465. The Tier 2 Public Notice shall include the mandatory health effects language from Appendix 64465-A for a total coliform MCL failure.

Section 64463.4 allows community water systems to use mail or direct delivery to each customer and the use of one or more of the following methods: publication in a daily or weekly newspaper, posting the public notice in a conspicuous public place within the water system or on the internet, or by delivery to community organizations. The appropriate Tier 2 notification that should be posted is included as Attachment B.

The Water System shall either mail or conduct direct delivery of the public notice to all customers served within the general service area. Section 116450(g) requires that upon receipt of notification from a public water system, schools must notify school employees, students, and parents (if the students are minors), residential rental property owners or managers (including nursing homes and care facilities) must notify their tenants and business property owners, managers or operators must notify employees of businesses located on the property. These secondary notification requirements are included in the public notice.



Proof of notification is required. The Water System shall complete Attachment C and return it to the Division by January 15, 2015.

#### DIRECTIVES

The Water System is hereby directed to take the following actions:

1. By December 31, 2014, the Double L Mobile Ranch Park water system shall provide public notification of the total coliform Maximum Contaminant Level failure for September 2014 by posting the notice provided as Attachment B in conspicuous locations throughout the area served by the water system and by direct delivery to each consumer.

By January 15, 2015, the Water System shall provide proof of public notification of the total coliform MCL violation for September 2014 by completing Attachment C and returning it to:

Betsy S. Lichti, Senior Sanitary Engineer  
Division of Drinking Water  
Drinking Water Field Operations Branch  
265 W. Bullard Avenue, Suite 101  
Fresno, CA 93704

2. By December 31, 2014, the Water System shall complete and submit the enclosed "Positive Total Coliform Investigation" form to the Division that describes the incident and all corrective actions taken, and the results of the investigation. The appropriate investigation report is provided as Attachment D.
3. The Water System will be required to maintain an approved Cross-Connection Control Program which shall include the following elements (as applied from Title



17, California Code of Regulations, Section 7584), and as outlined in Attachment

E:

- a. The conducting of surveys to identify water user premises or locations where cross connections are likely to occur,
- b. The provisions of backflow protection by the Water user at the user's connection or within the user's premises or both,
- c. The provision of at least one person trained in cross-connection control to carry out the cross-connection program,
- d. The establishment of a procedure or system for annual testing of backflow preventers, and
- e. The maintenance of records of locations, tests, and repairs of backflow preventers.

**The survey and documentation of a valid Cross Connection Control Program shall be submitted to the Division by January 31, 2015.** You may contact the SWRCB-DDW Fresno District for guidance in identifying a cross-connection specialist to conduct the survey.

4. The Water System shall conduct a bacteriological cycle test on the raw water produced from the well. The cycle test shall be conducted using the guidelines provided as Attachment F. All of these raw water samples shall be analyzed for total and fecal coliform using the Multiple Tube Fermentation Method to determine the density of the coliform. The results of these samples shall be reported to the Division by the 10th day of the following month.

5. In the event that chlorination is still being provided after **January 31, 2015**, an application (Form EH 100, Attachment G) for a permit amendment for the addition of continuous chlorination treatment must be submitted to the Division. A permit fee of \$258 shall be included at the time the application is submitted to the Division. While the Water System is being chlorinated, monthly raw water bacteriological samples should be collected from the wellhead and analyzed, and chlorine residuals should be monitored throughout the distribution system.



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**PARTIES BOUND**

This Citation shall apply to and be binding upon Double L Mobile Ranch Park Water System, its officers, directors, shareholders, agents, employees, contractors, successors, and assignees.

**SEVERABILITY**

The Directives of this Citation are severable, and Double L Mobile Ranch Park Water System shall comply with each and every provision thereof, notwithstanding the effectiveness of any other provision.



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**FURTHER ENFORCEMENT ACTION**

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The California SDWA authorizes the Division to: issue citation with assessment of administrative penalties to a public water system for violation or continued violation of the requirements of the California SDWA or any permit, regulation, permit or order issued or adopted thereunder including, but not limited to, failure to correct a violation identified in a citation or compliance order. The California SDWA also authorizes the Division to take action to suspend or revoke a permit that has been issued to a public water system if the system has violated applicable law or regulations or has failed to comply with an order of the Division; and to petition the superior court to take various enforcement measures against a public water system that has failed to comply with violates an order of the Division. The Division does not waive any further enforcement action by issuance of this citation.

12/12/14  
Date

Betsy S. Lichti  
Betsy S. Lichti, P.E.,  
District Engineer  
Division of Drinking Water  
State Water Resources Control Board



**Attachments:**

- A. Bacteriological Distribution and Source Monitoring Reports
- B. Public Notice Template
- C. Proof of Notification
- D. Positive Total Coliform Investigation Form
- E. Guidelines for Development of Cross Connection Control Program
- F. Guidelines for Conducting a Well Cycle Test
- G. Permit Amendment Application

# Bacteriological Distribution Monitoring Report

**1000248 Double L Mobile Ranch Park**
**Distribution System Freq: 1/M**

Sample Date	Time	Location	T Coli	E Coli	F Coli	Type	Cl2	Violation	Comment
1/13/2014	14:25	Space 2	A	A		Routine			
1/13/2014	14:35	Space 30	A	A		Routine			
1/13/2014	14:48	Space 15	A	A		Routine			
2/13/2014	11:50	Space 15	A	A		Routine			
2/13/2014	12:05	Space 2	A	A		Routine			
2/13/2014	12:15	Space 30	A	A		Routine			
3/5/2014	14:30	Space 2	P	A		Routine			
3/7/2014	10:30	Well 2	P	A		Source Repeat			
3/7/2014	10:40	Space 30	P	A		Repeat		MCL	5/23/14 Issued 03-23-14C-0.
3/7/2014	11:00	Space 15	P	A		Repeat			
3/7/2014	11:10	Well 2	P	A		Source Repeat			
3/17/2014	10:30	Space 12	A	A		Repeat	1.1		
3/17/2014	10:35	Space 15	A	A		Repeat	0.82		
3/17/2014	10:45	Space 30	A	A		Repeat	1.1		
3/17/2014	10:50	Well Head #2	<1.0	<1.0		Source Repeat	0.0		
4/29/2014	14:38	Space #2	A	A		Routine	2.0		
4/29/2014	14:50	Space #15	A	A		Routine	1.9		
4/29/2014	14:55	Space #30	A	A		Routine	2.0		
4/29/2014	15:05	Space #2	A	A		Routine			
4/29/2014	15:10	Space #15	A	A		Routine			
5/7/2014	9:30	space 2	A	A		Routine			
5/7/2014	9:45	Space 15	A	A		Routine			
5/7/2014	10:00	Space 30	A	A		Routine			
5/7/2014	10:20	Space 2 (2)	A	A		Routine			
5/7/2014	10:45	space 15 (2)	A	A		Routine			
6/23/2014	9:30	Space 30 HB	A	A		Routine			
7/11/2014	10:30	Space #2	A	A		Routine			
8/1/2014	10:40	Space #36	A	A		Routine			
9/8/2014	10:00	Space 15	P	A		Routine			
9/10/2014	11:50	Well Head	7.8			Source Repeat			
9/10/2014	11:55	Space 2	P	A		Repeat			
9/10/2014	12:10	Space 30	P	A		Repeat			
9/10/2014	12:20	Space 15	P	A		Repeat		MCL	
9/10/2014	12:30	Space 2	P	A		Repeat			
10/3/2014	10:30	Space 15	A	A		Routine	1.7		
10/3/2014	11:00	Space 30	A	A		Routine	1.8		
10/3/2014	11:20	Space 2	A	A		Routine	1.8		
10/3/2014	11:30	Space 15 (2)	A	A		Routine			
10/3/2014	11:40	Space 2 (2)	A	A		Routine			

## Violation Key

MCL	Exceeds the maximum contaminant level	MR5	Incorrect number of repeat samples as follow-up to a positive sample
MR1	No monthly sample for the report month	MR6	No source sample
MR2	No quarterly sample for the report month	MR7	No summary report submitted
MR3	Incorrect number of routine samples for the report month	MR8	Other comments and/or info
MR4	Did not collect 5 routine samples for previous month's positive sample	MR9	Cl2 not reported

**IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER**

Este informe contiene información muy importante sobre su agua potable.  
Tradúzcalo o hable con alguien que lo entienda bien.

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**Double L Mobile Ranch Park Has Levels of Coliform Bacteria  
Above the Drinking Water Standard**

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Our water system recently failed a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what you should do, what happened and what we did to correct this situation.

We routinely monitor for drinking water contaminants. We took six samples to test for the presence of coliform bacteria during September 2014. Six (6) of these samples showed the presence of total coliform bacteria. The standard is that no more than 1 sample per month may show the presence of coliform bacteria.

**What should I do?**

- **You do not need to boil your water or take other corrective actions.**
- This is not an emergency. If it had been, you would have been notified immediately. Total coliform bacteria are generally not harmful themselves. *Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.*
- Usually, coliforms are a sign that there could be a problem with the treatment or distribution system (pipes). Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or *E. coli*, are present. **We did not find any of these bacteria in our subsequent testing.**
- People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1(800) 426-4791.
- If you have other health issues concerning the consumption of this water, you may wish to consult your doctor.

**What happened? What is being done?**

[Describe corrective action]. \_\_\_\_\_

For more information, please contact \_\_\_\_\_ [name of contact] at \_\_\_\_\_ [phone number] or \_\_\_\_\_ [mailing address].

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail.*

**Secondary Notification Requirements**

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- **SCHOOLS:** Must notify school employees, students, and parents (if the students are minors).
- **RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS** (including nursing homes and care facilities): Must notify tenants.
- **BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS:** Must notify employees of businesses located on the property.

This notice is being sent to you by Double L Mobile Ranch Park

Date distributed: \_\_\_\_\_

ATTACHMENT C

**PROOF OF NOTIFICATION**

(Return with copy of notice)

As required by Section 116450 of the California Health and Safety Code, I notified all users of water supplied by the **Double L Mobile Ranch Park** of the failure to meet the **total coliform bacteria MCL** for the month of **September 2014** as directed by the Division.

Notification was made on \_\_\_\_\_ by  
(date)

mailed and/or hand delivered and/or posted written notice.  
(circle all that apply)

\_\_\_\_\_  
Signature of Water System Representative

\_\_\_\_\_  
Date

**DISCLOSURE:** Be advised that Section 116725 and 116730 of the California Health and Safety Code state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the attached order may be liable for a civil penalty not to exceed five thousand dollars (\$5,000) for separate violation for each day that violation continues. In addition, the violators may be prosecuted in criminal court and upon conviction, be punished by a fine of not more than \$25,000 for each day of violation, or be imprisoned in the county jail not to exceed one year, or by both the fine and imprisonment.

Due: January 15, 2015  
Total Coliform MCL Failure: September 2014  
System Number: 1000248  
Citation No.: 03-23-14C-078

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**Southern California Drinking Water Field Operations Branch**  
265 W. Bullard Avenue, Suite 101, Fresno, CA 93704  
(559) 447-3300; Fax (559) 447-3304  
Intern-et Address: <http://www.dhs.ca.gov/ps/ddwem/>

# POSITIVE TOTAL COLIFORM INVESTIGATION

Attachment D

## Simple Well with Pressure Tank Systems

This form is intended to assist public water systems in completing the investigation required by the SWRCB Drinking Water Division (Section 64426(b) of Title 22, California Code of Regulations) and may be modified to take into account conditions unique to the system.

### ADMINISTRATIVE INFORMATION

PWS Name:		PWS ID NUMBER:	
Name		Address	
Telephone #			
Operator in Responsible Charge (ORC)			
Person that collected TC samples if different than ORC			
Owner			
Certified Laboratory for Microbiological Analyses			
Date Investigation Completed:			
Month(s) of Total Coliform MCL Failure:			

### INVESTIGATION DETAILS

SOURCE	WELL (name)	WELL (name)	WELL (name)	WELL (name)	COMMENTS
1. Inspect each well head for physical defects and report					
a. Is raw water sample tap upstream from point of disinfection?					
b. Is wellhead vent pipe screened?					
c. Is wellhead seal watertight?					
d. Is well head located in pit or is any piping from the wellhead submerged?					
e. Does the ground surface slope towards well head?					
f. Is there evidence of standing water near the wellhead?					
g. Is there a check valve on the well discharge line? Is the check valve seating properly?					
h. Are there any connections to the raw water piping that could be cross connections? (describe all connections in comments)					
i. Is the wellhead secured to prevent unauthorized access?					
j. To what treatment plant (name) does this well pump?					
k. How often do you take a raw water total coliform (TC) test?					
l. Provide the date and result of the last TC test at this location					

# POSITIVE TOTAL COLIFORM INVESTIGATION

Attachment D

Page 2 of 3

DISTRIBUTION SYSTEM	SYSTEM RESPONSES
1. What is the minimum pressure you are maintaining in the distribution system?	
2. Did pressure in the distribution system drop to less than 5 psi prior to experiencing the TCR positive finding.	
3. Has the distribution system been worked on within the last week? (service taps, hydrant flushing, main breaks, main extensions, etc.) If yes, provide details.	
4. Are there any signs of excavations near your distribution system not under the direct control of your maintenance staff?	
5. Did you inspect your distribution system to check for mainline leaks? Do you or did you have a mainline leak?	
6. If there was a mainline leak, when was it repaired?	
7. On what date was the distribution system last flushed?	
8. Is there a written flushing procedure you can provide for our review?	
9. Do you have an active cross connection control program?	
10. What is name and phone number of your Cross-Connection Control Program Coordinator?	
11. Is the review and testing of backflow prevention devices current?	
12. On what date was the last physical survey of the system done to identify cross-connections?	

SAMPLE SITE EVALUATION (Complete for all TC+ or EC+ findings)	Routine Site TC+ or EC+	Upstream Site	Downstream Site	Sample 4 (specify)
1. What is the height of the sample tap above grade? (inches)				
2. Is the sample tap located in an <b>exterior</b> location or is it protected by an <b>enclosure</b> ?				
3. Is the sample tap threaded, have a swing arm (kitchen sink) or aerator (sinks)?				
4. Is the sample tap in good condition, free of leaks around the stem or packing?				
5. Can the sample tap be adjusted to the point where a good laminar flow can be achieved without excessive splash?				
6. Is the sample tap and area around the sample tap clean and dry (free of animal droppings, other contaminants or spray irrigation systems)				
7. Is the area around the sample tap free of excessive vegetation or other impediments to sample collection				
8. Describe how the tap was treated in preparation for sample collection (ran water, swabbed with disinfectant, flamed, etc.)				
9. Is this sample tap designated on the sampling plan submitted with this information request?				
10. What were weather conditions at the time of positive sample (rainy, windy, sunny)?				

# POSITIVE TOTAL COLIFORM INVESTIGATION

Attachment D

Page 3 of 3

GENERAL OPERATIONS:	Response
1. Where there any power outages that affected water system facilities during the 30 days prior to the TC+ or EC + findings?	
2. Where there any main breaks, water outages, or low pressure reported in the service area where TC+ or EC+ samples were located.	
3. Does the system have backup power or elevated storage?	
4. During or soon after bacteriological quality problems, did you receive any complaints of any customers' illness suspected of being waterborne? How many?	
5. What were the symptoms of illness if you received complaints about customers being sick?	

## ADDITIONAL INFORMATION TO BE SUBMITTED WITH RESPONSES TO THE ABOVE QUESTIONS

1. **Sketch** of System showing all sources, treatment locations, storage tanks, microbiological sampling sites and general layout of the distribution system including the location of all hazardous connections such as the wastewater treatment facility.
2. A set of photographs of the well, pressure tanks, and storage tanks in the system may be submitted if they would show that the contamination is directly related and changes have been made since the last inspection by our Division.
3. Name, certification level and certificate number of the Operator in Responsible Charge.
4. Copy of the last cross connection survey performed that identifies the location of all unprotected cross connections.

**SUMMARY:** BASED ON THE RESULTS OF YOUR INVESTIGATION AND ANY OTHER INFORMATION AT YOUR DISPOSAL, WHAT DO YOU BELIEVE TO BE THE CAUSE OF THE POSITIVE TOTAL COLIFORM SAMPLES FROM YOUR PUBLIC WATER SYSTEM?

**CERTIFICATION:** I CERTIFY THAT THE INFORMATION SUBMITTED IN RESPONSE TO THE QUESTIONS ABOVE IS ACCURATE TO THE BEST OF MY PROFESSIONAL KNOWLEDGE

NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

## **Cross-Connection Control for Small Community Water Systems**

### **SWRCB DDW-Fresno District**

**Purpose of Cross-Connection Control Program:** Water provided by a public water system may be contaminated via cross-connections within the distribution system. The purpose of the cross-connection control program is to reduce the hazard of contamination of the public water system by identifying actual and potential cross-connections and taking action to protect the system from these hazards. This is accomplished by installing backflow prevention assemblies where hazards are identified; or ensuring that water-using equipment on the premises is installed in accordance with plumbing code requirements and good practice.

#### **What are cross-connections?**

Cross-connections are actual and potential unprotected connections between a potable water system and any source or system containing unapproved water or a substance which is not safe. Examples of cross-connections include:

1. Improperly installed irrigation systems that may allow backsiphonage of stagnant, bacteriologically unsafe water into the piping system.
2. Improperly plumbed water-using devices such as hot-tubs, boilers or commercial dishwashers which may allow unsafe water back into the domestic piping system.
3. Irrigation systems served by an auxiliary source, such as a private well or creek. Such systems create a potential for major contamination of the public water system via interties with the domestic piping system.
4. Interconnections between the potable system and a non-potable system.

#### **What the Regulations Require**

Section 7584 of the California Code of Regulations requires that each public water system have a cross connection control program that includes these elements:

1. The adoption of operating rules or ordinances to implement the cross-connection program.
2. The conducting of surveys to identify water user premises where cross connections exist or are likely to occur.
3. The provisions of backflow protection by the water user at all connections where a cross connection hazard has been identified.
4. The provision of at least one person trained in cross connection control to carry out the program.
5. The establishment of a procedure or system for testing backflow prevention assemblies.
6. The maintenance of records of locations, tests, and repairs of backflow prevention assemblies within each water supplier's distribution system.



## WATER SUPPLY WELL CYCLE TEST FOR BACTERIOLOGICAL CONTAMINATION

When a water supply well is suspected to be a possible source of bacteriological contamination in a domestic water system the well must be investigated. The cycle test is an effective method of evaluating the potential for the well to produce bacteriologically contaminated water.

The following procedure is considered to be an effective test for evaluation of the well. The well should be inactive for a minimum of ½ hour or longer before the start of the test, to allow the well to return to a static condition. For best results the well should discharge to waste, or if this is not possible, the discharge should be such that the well will run continuously for the 30 minute duration of the test. Have on hand an adequate supply of sample containers and identification tags.

- Open the discharge line and turn the pump on.
- Collect bacteriological samples at approximately:
 

<b>No. 1</b> first water out of discharge	<b>No. 4</b> at 15 minutes
<b>No. 2</b> at 1 minute	<b>No. 5</b> at 30 minutes
<b>No. 3</b> at 5 minutes	

If the cycle test procedure is being done in follow-up to a previous coliform-positive sample from the well, the above samples should be analyzed by one of the methods listed below or a comparable method that would allow a determination of the density or enumeration of coliform present. If any of the cycle test samples are positive, the well should be disinfected and a follow-up cycle test performed by a method that would allow a determination of the density or enumeration of coliform present.

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### BACTERIOLOGICAL LABORATORY TEST PROCEDURES

#### Benefits and Disadvantages

#### Colilert Quanti-Tray or ColiPlate enzyme substrate test method: (Uses 100 ml sample)

- |                |   |
|----------------|---|
| Benefits:      | Determines degree of contamination with a MPN result (Most Probable Number)<br>Gives total coliform and E. coli results |
| Disadvantages: | More Expensive  |

#### Multiple Tube test method: (Uses 100 ml sample divided to ten 10 ml tubes)

- |  |   |
|--|---|
| Benefits:  | Determines degree of contamination with a MPN result (Most Probable Number) |
| Disadvantages:   | More expensive  |
| NOTE: For either of the above methods, time for test completion depends upon media used.   |   |
| Defined substrate medias yield faster results, 18 to 48 hours (varies with brand of media) |   |
| Fermentation media takes 48 to 96 hours for results.                                       |   |

#### Membrane Filter (Uses 100 ml sample)

- |                |   |
|----------------|---|
| Benefits:      | Results in 24 hours<br>Relatively inexpensive   |
| Disadvantages: | Can be difficult to filter adequate size of sample<br>Colonies of non-coliform bacteria can obscure coliform bacteria thus nullifying results and requiring re-testing. |

**STATE OF CALIFORNIA**  
**APPLICATION**  
**FOR**  
**DOMESTIC WATER SUPPLY PERMIT AMENDMENT**  
**FROM**

Applicant: \_\_\_\_\_  
 (Enter the name of legal owner, person(s) or organization)

Address: \_\_\_\_\_

System Name: \_\_\_\_\_

System Number: \_\_\_\_\_

TO: State Water Resources Control Board  
 Division of Drinking Water  
 Southern California Field Operations Branch  
 Fresno District Office  
 265 W. Bullard Avenue, Suite 101  
 Fresno, California, 93704



Pursuant and subject to the requirements of the California Health and Safety Code, Division 104, Part 12, Chapter 4 (California Safe Drinking Water Act), Article 7, Section 116550, relating to changes requiring an amended permit, application is hereby made to amend an existing water supply permit to \_\_\_\_\_

(Applicant must state specifically what is being applied for - whether to construct

new works, make alterations or additions in works or sources, or change or modify treatment.)

I (We) declare under penalty of perjury that the statements on this application and on the accompanying attachments are correct to my (our) knowledge and that I (we) are acting under authority and direction of the responsible legal entity under whose name this application is made.

By: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Dated: \_\_\_\_\_